

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 470A

Mile Post (ON)11: 17.368 mi

Bridge Name: F-16-KM Inspection Date: 2/27/2013 Sufficiency Rating: 98.1 Not Eligible

NBI Reporting ID:	F-16-KM	Hist Signif 37:	5	UW Inspection Date 93B:	
Rgn/Sectn 2E/2M:	68	Posting status 41:	A	SI Date 93C:	
Trans Region 2T:	02	Service on/un 42A/B:	1 1	Bridge Cost 94:	\$ 0
County Code 3:	035	Main Mat/Desgn 43A/B:	5 2	Roadway Cost 95:	\$ 0
DOUGLAS		Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 0
Place Code 4:	45255	Main Spans Unit 45:	1	Year of Cost Estimate 97:	
LITTLETON		Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Rte.(On/Under)5A:	1	Horiz Clr 47:	57.2 ft	Border Bridge Number 99:	
Signing Prefix 5B:	3	Max Span 48:	98.5 ft	Defense Highway 100:	0
Level of Service 5C:	8	Str Length 49:	101.0 ft	Parallel Structure 101:	L
Directional Suffix 5E:	0	Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
Feature Intersected 6:		Width Curb to Curb 51:	57.2 ft	Temporary Structure 103:	
S. ERICKSON BLVD.		Width Out to Out 52:	60.7 ft	Highway System 104:	1
Facility Carried 7:		Deck Area:	6,498. sq. ft	Fed Lands Hiway 105:	0
SH 470 ML WBND		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	0000
Alias Str No.8A:		Min Undrclr Ref 54A:	H	Deck Type 107:	1
		Min Undrclr 54B:	18.4 ft	Wearing Surface 108A:	6
Prll Str No. 8P		Min Lat Clmce Ref R 55A:	H	Membrane 108B:	2
F-16-KL		Min Lat Undrclr R 55B:	11.0 ft	Deck Protection 108C:	1
Location 9:		Min Lat Undrclr L 56:	0.0 ft	Truck ADT 109:	5 %
.3 MI E. OF JCT SH 85		Deck 58:	7	Trk Net 110:	1
Max Clr 10:	328.1 ft	Super 59:	8	Pier Protection 111:	
BaseHiway Net12:	1	Sub 60:	7	NBIS Length 112:	Y
IrsinvRout 13A:	000000470A	Channel/Protection 61:	N	Scour Critical 113:	N
IrrsubRout No13B:	00	Culvert 62:	N	Scour Watch 113M:	0
Latitude 16:	39d 33' 50"	Oprrng Rtg Method 63:	1 LF Load Fact	Future ADT 114:	55,130
Longitude 17:	105d 01' 36"	Operating Rating 64:	60.1	Year of Future ADT 115:	2025
Range18A:	68 W	Inv Rtnng Method 65:	1	CDOT Str Type 120A:	CPG
Township18B:	68	Inventory Rating 66:	35.1	CDOT Constr Type 120B:	32
Section18C:	5	Asph/Fill Thick 66T:	004 "in"	Inspection Indic 122A:	
Detour Length 19:	0.6 mi	Str. Evaluation 67:	7	Inspection Trip 122AA:	
Toll Facility 20:	3	Deck Geometry 68:	7	Inspection Schedule ID:	ODD MAY E14
Custodian 21:	1	Undrclr Vert/Hor 69:	7	Maintenance Patrol 123:	30
Owner 22:	1	Posting 70:	5	Expansion Dev/Type124:	O
Functional Class 26:	12	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	R 1
Year Built 27:	1984	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes on 28A:	3	Type of Work 75A:		Str Rating Date 130:	2/5/1998
Lanes Under 28B:	4	Work Done By 75B:		Special Equip 133:	
ADT 29:	37,000	Length of Improvment 76:	0.0 ft	Vert Clr N/E 134A/B/C:	X 99.99 0
Year of ADT 30:	2005	Insp Team Indicator 90B:	WHITE TEAM	Vert Clr S/W 135A/B/C:	X 99.99 0
Design Load 31:	6	Inspector Name 90C:	CHURCHESK	Vertical Clr Date:	5/5/1905
Apr Rdwy Width 32:	38.0 ft	Frequency 91:	24 months	Weight Limit Color: 139:	0
Median 33:	1	FC Frequency 92A:		Str Billing Type:	U
Skew 34:	2.00 °	UW Frequency 92B:		Userkey 1 - System:	ONSY
Structure Flared 35:	1	SI Frequency 92C:		Userkey 7-Update Indic:	
Sfty Rail 36a/b/c/d:	1 1 1 1	FC Inspection Date 93A:			
Rail ht36h:	34 "in"				

Inspector Name: CHURCHESK

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
26/4	Conc Deck/Coatd Bars	(SF)	6,498	100 %	6,498	0 %	0	0 %	0	0 %	0	0 %	0
109/4	P/S Conc Open Girder	(LF)	792	100 %	792	0 %	0	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	127	100 %	127	0 %	0	0 %	0	0 %	0	0 %	0
300/4	Strip Seal Exp Joint	(LF)	127	100 %	127	0 %	0	0 %	0	0 %	0	0 %	0
302/4	Compressn Joint Seal	(LF)	127	100 %	127	0 %	0	0 %	0	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	100 %	4	0 %	0	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	202	100 %	202	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
359/4	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
26/4	Conc Deck/Coatd Bars	3 - 4 Inches asphalt. New overlay since last inspection. Looks good.
109/4	P/S Conc Open Girder	Bottom flange of Girder G has been patched, about 20 ft. from Abutment 1.
215/4	R/Conc Abutment	Looks OK.
300/4	Strip Seal Exp Joint	Strip seal expansion joints with latex modified concrete end dams above sleeper slabs. Both open about 1½ inches, and filled with sand.
302/4	Compressn Joint Seal	At abutments. Not visible. Overlaid with asphalt.
321/4	R/Conc Approach Slab	Asphalt covered. Look OK.
325/4	Slope Prot/Berms	Concrete slope paving on abutment slopes, with retaining walls at toe of both. Concrete slope paving at #1 has been broken out for placement of utility pull box below Bay C. (See 2013 Photo) Panels along Abutment 1 have settled about 1 inch, and panel at right end has pulled away about 1 inch from face of abutment. Panel at left end of Abutment 2 has settled about 2 inches. Panels at right half of Abutment 2 have pulled away about 2 inches from face of abutment.
326/4	Bridge Wingwalls	U-type abutment wings. Sub-wing at right fwd. is spalled (24 inches H x 20 inches W x 6½ inches D) with some exposed rebar. (See 2012 Photo) Sub-wing at left rear is pushing out about 2 inches, with some light scale and minor chipping. Minor chipping at left fwd. sub-wing. Some waterstains.

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Elem/Env	Description	Element Notes
331/4	Conc Bridge Railing	Concrete Type R bridge rail (Jersey barrier). Some minor scrapes on right rail. Typical light vert. cracks with some moisture intrusion.
340/4	Superstr Cnc Coating	On exterior side of exterior girders, overhangs, and bridge rail. Wearing off in spots on rail.
341/4	Substr Conc Coating	On abutments and wings. Looks OK.
359/4	Soffit Smart Flag	Some diag. cracks with efflor. near abutments, and 3 to 6 trans. cracks with efflor. per bay (except widening on left side). Some trans. cracks with efflor. in overhangs.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
360.03	App SI & S	2/27/2013	_	2016	300

Patch concrete slope paving at Abutment 1, where concrete was removed for placement of utility box.

398	Misc Br Wk	2/27/2013	_	2016	200
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Remove tree that is growing at toe of Abutment 2 slope on north side of bridge.

Bridge Notes

Utility: 2 inch Ø metal conduit attached to exterior side of left rail.

Vertical clearance is posted at 14 ft. - 6 inches above SBnd lanes.

Approach railing has settled (measured at top of rail):
 3¼ inches at left rear approach, and also pushed 2 inches;
 2 inches at right rear approach;
 1 inch at left fwd. approach, and broken at joint;
 ½ inch at right fwd. approach.

Exterior side of right rail is spalled at end of approach slab.

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Inspection Notes

Temperature: 25°
Time: 11:10
Weather: Clear

Scope:

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: Type: Regular NBI

Team Leader Inspection Check-off:

☐ FCM's ☐ Vertical Clearance
☐ Posting Signs ☐ Stream Bed Profile
☐ Essential Repair Verification

Inspection Team:

Inspection Date: 02/27/2013

Inspector: CHURCHESK

Inspector (Team Leader)